Alexandria Dockless Mobility Pilot Evaluation

November 2019

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Contents

Executive Summary

In November 2018, the City of Alexandria launched a pilot program to allow private companies to operate shared mobility devices (such as dockless bicycles and scooters available for rent) for a nine-month pilot period. Multiple neighboring jurisdictions permitted these devices and they began appearing in Alexandria without permits. The pilot program allowed the City to regulate and manage the scooter companies and users and gain a better understanding of the issues and concerns of the community.

What is the Dockless Mobility Pilot?

The purpose of the pilot was to evaluate the safety and use of shared electric scooters and the overall performance of scooter companies in Alexandria. During the pilot, City staff engaged with the public to gain insights about community scooter use and opinions, educate the public about the program, and provide parking and safe riding instructions. Trip data was collected and analyzed to determine where scooter trips occurred, and better understand issues such as safety and equity.

Alexandria's Pilot by the Numbers

- There are approximately 15,000 users registered in Alexandria.
- Riders took over 230,000 scooter trips in the first 9 months of the pilot.
- 1/3 of all weekday trips were taken during morning and evening commute hours.
- Approximately 50% of scooter users reported that they replaced driving trips by riding a scooter.
- 66% of complaints received via the City's Dockless Mobility email inbox were parking-related.
- 15 crashes involving scooters were reported during the pilot based on APD, operator, and citizen reporting.
- 18 minor injuries and 3 suspected serious injuries were reported due to a scooter crash.
- 20-25% of scooter trips in Alexandria started or ended near a Metro stop before the summer 2019 Metro shutdown (WMATA Platform Improvement Project).
- 51% support a Phase II pilot and 49% do not.
- Of those who support a Phase II pilot, 35% have never ridden a scooter.

Key Findings

1. Scooters have provided increased access and mobility in Alexandria.
2. Scooters are a new form of mobility and safe riding is a concern.
3. Improper scooter parking can disrupt the pedestrian right of way and impede ADA access.
4. Scooters could improve transportation equity but new policy is needed.
5. The program recouped costs but modifications to management will minimize City financial and staff resources.

Alexandria is Considering...

Installing more parking corrals, adding or modifying no-park zones, policy to require scooter distribution to address transportation inequity, improving data reporting and management, streamlining the reporting process for scooter parking issues, and more to improve the program.

Next Steps

The pilot program has demonstrated that shared scooters are providing a valuable transportation function, increasing mobility access and options in Alexandria. Given the challenges the City experienced during the pilot, as well as the rapidly evolving nature of shared mobility technologies and business models, more study is needed. Staff recommends a Phase II Pilot in 2020 to allow time for the City to implement and evaluate program changes.

Introduction

Shared bicycles and scooters are providing increased transportation options and enhancing mobility in communities across the United States. The Washington D.C. metropolitan area is at the national forefront providing shared mobility options for the region's residents, commuters, and visitors alike. The shared mobility industry—the devices and the technology—is evolving at a rapid pace and so cities must adapt to manage recent and upcoming innovations.

Shared Mobility Context

Docked Bikeshare

The District of Columbia launched the first station-based bikeshare system in North America in 2008. Alexandria joined the Capital Bikeshare system in 2012. The system is currently comprised of six jurisdictions in the D.C. metropolitan area and more than 4,300 bikes. There are 31 stations in Alexandria.

Dockless Bikeshare

Dockless mobility launched in the Greater Washington D.C. area in 2017 when companies requested to bring dockless bicycles to Washington D.C. Washington D.C. launched a demonstration in late 2017. Most operators that initially provided dockless traditional bicycles have since shifted to electric bicycles and scooters.

WHAT IS SHARED MOBILITY?

In this report, "shared mobility" refers to privately operated dockless electric-assist bicycles and electric-scooters.

Scooter Share

Scooter share first launched in the U.S. in September 2017 in Santa Monica, CA. In the summer of 2018, scooter companies deployed in more than 40 cities, often without permits or warning of their arrival and so cities were forced to quickly set up a regulatory framework to manage what was already happening in their jurisdiction.

Because other local jurisdictions, including Washington, DC and Arlington County permitted dockless bicycles and scooters, the devices began appearing in Alexandria in mid-2018 but there was no mechanism available to the City to manage the companies. Alexandria recognized that a permit process would give the City the means to manage the use of scooters in the City and so the dockless mobility pilot program was approved by City Council in November 2018.

Shared Mobility Growth

In 2018, people took 84 million trips on shared micromobility devices across the U.S., over twice as many as the previous year.[1] These included trips on both station-based bikeshare systems and dockless bikes and scooters, although the rapid growth in shared mobility trips in 2018 corresponded primarily to the introduction of scooter share across the country.

HOW DOES SCOOTER SHARE WORK?

Shared scooter systems have the following characteristics:

- Scooters are rented for one-way trips using a mobile phone application.
- During the pilot, all companies offered an option to rent a scooter via phone call or text message (to facilitate use without a smartphone).
- Scooters are parked where companies stage them and where users end their trips.
- Companies regularly pick scooters up for charging, to perform maintenance, and to redistribute scooters in the system.
- Scooters are permitted to park in the public right-of-way.

1 Shared Micromobility in the U.S.: 2018. National Association of City Transportation Officials (NACTO). https://nacto.org/shared-micromobility-2018/

Timeline of Dockless Mobility in Alexandria

November 2018 — City Council approves Pilot Program

January 2019 — Lime

February 2019 — Bolt, Lyft

March 2019 — Bird

April 2019 — Skip, Spin

Variable message board user education

June 2019 — Jump

Variable Message Boards (VMBs) were set to show safe scooting riding reminders.

July 2019 — Pilot update to City Council, No-Park geofencing implemented

August 2019 — Parking corrals installed in Old Town

September 2019 — Public outreach events and community feedback

October 2019 — Community outreach for Draft Recommendations

December 2019 — Council consideration of pilot findings and recommendations

Program Goals

The Alexandria Pilot program's goals are to:

- Manage and regulate scooter use in the City.
- Analyze successes and issues through data analysis, community input, and a review of leading practices from other communities.
- Gather information for program adjustments or next steps (policy changes, future pilot conditions, or other longer-term management approaches).
- Expand access to more transportation modes.
- Identify safety concerns.

Advancing the City's Mobility Goals

The scooter pilot provides the City an opportunity to advance its transportation policy goals and objectives outlined in:

- Strategic Plan Alexandria FY 2017–FY2022
- City of Alexandria Complete Streets Policy
- City of Alexandria Transportation Master Plan
- Eco-City Alexandria Environmental Action Plan 2040

> *"In 2022, Alexandria is regionally linked and easy to navigate regardless of resources or ability. City government supports a wide variety of safe, connected transportation options that enable access to daily activities."*
>
> - Strategic Plan Alexandria FY2017-2022, Page 26

Regulatory Framework and Compliance

The Dockless Mobility Pilot was managed under existing laws and regulations, and a memorandum of understanding between the operators and the City.

LAWS AND REGULATIONS

Federal, State and City laws and regulations were applicable to scooters during the pilot program.

Sidewalk Riding

- Virginia state law conflicted on sidewalk regulations. Section 46.2-903 prohibited scooters from riding on sidewalks but Section 46.2-904 allowed scooter riding on sidewalks. This contradiction meant that sidewalk riding was not enforceable by Alexandria Police during the pilot under State law.
- Under City Code, bicycle riding is permitted on sidewalks except on King Street and several other streets.

Parking

- Per Section 10-7-10 of City Code, bicycles must not be parked in a manner that unreasonably impedes pedestrian or vehicular traffic on a public roadway.
- Per the pilot program MOU, scooters were not permitted to be parked in a manner that unreasonably impedes pedestrian or vehicular traffic on a public roadway.

Devices

- Shared dockless bicycles must comply with Code of Federal Regulations (CFR) Title 16, Chapter II, Subchapter C, Part 1512 – Requirements for Bicycles.
- Both bicycles and scooters must comply with Code of Virginia Section 46.2-1015 requiring headlights, tail-lights, or reflectors.
- Bicycles and scooters must comply with Consumer Product Safety Commission standards.
- Scooters must meet the Code of Virginia Section 46.2-100 definition of a motorized foot-scooter powered by an electric motor having an input of no more than 1,000 watts.

OPERATOR REQUIREMENTS: MEMORANDUM OF UNDERSTANDING

Right-of-way permits were issued to scooter operators after each operator signed a Memorandum of Understanding (MOU) with the City. Seven companies were permitted to operate—Bird, Bolt, Jump, Lime, Lyft, Skip, Spin during the pilot program. The MOU set out the following conditions for operators:

Device Deployment

- Maximum of 200 scooters
- The number of scooters in operation was monitored by the City.

Management and Communication

- $5,000 permit fee for 9 month pilot and additional $5,000 extension fee.
- Establish a General Manager who served as the point of contact with the City.
- Collect and store bicycles and scooters for emergency, weather, or other City-defined events.

Safety

- Bicycles and scooters were required to meet State and federal safety standards.
- All operators signed an MOU Amendment in September which required them to notify the City if a user or the company contacted emergency services.

Parking

- Bicycles and scooters were not permitted to park in one location in the public right-of-way for more than seven days without moving.
- Operators were required to address complaints about incorrectly parked devices within 2 hours of being notified.

Data

- Operators were required to provide monthly data reports to the City.
- Operators were required to provide a publicly-accessible API on their website.
- Operators were required to use the General Bikeshare Feed Specification (GBFS) for its bicycles and scooters and to provide the City access to its GBFS data stream.

Penalties, Fines, and Remedies

- Bicycles and scooters were impounded by the City for noncompliance with the MOU.
- Operators were subject to fines or other costs from the City.
- Operators were subject to a $5,000 surety bond with the City to pay for removal or storage of bicycles and scooters.
- Operators could be suspended if not compliant with permit terms.
- The City indemnified itself in the MOU so that operators assumed liability.

Adjusting Along the Way

Several adjustments were made during the pilot program:

- The City instituted no-park zones on the waterfront and at King Street Metro Station using geofencing technology.
- The City established corrals for scooter parking in high-ridership areas to shift parking away from the sidewalk onto the street.
- The City created and distributed scooter hang-tags, with riding and parking tips and information on how to contact scooter companies to report improper parking and other concerns.
- Scooter riding and parking in the Waterfront is a concern due to the high volume of pedestrians.

WATERFRONT ADJUSTMENTS

Data shows the impact of these mid-pilot changes on the Waterfront:

- Geofenced no-park zone
- 2 scooter parking corrals installed near the Waterfront

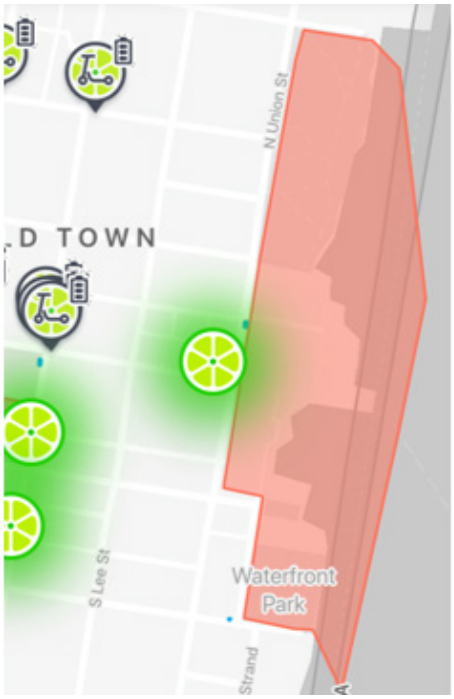
Have these Changes Helped?

- Before: approximately 1,500 scooters parked per month
- After: 80% decrease in scooter parking in the Waterfront
- Approximately 400 parked in or near corrals per month
- 50-65% decrease of scooter riding through/by the Waterfront area

Alexandria Scooter Corral Locations

Scooter Educational Hang-Tag

Alexandria No-Park Zones (Red) and Corrals (Green Markers) as Viewed on Scooter App



A scooter User Rents a Scooter from a Parking Corral in Old Town

Report Framework

This report analyzes the pilot program using data collected by the scooter operators and information collected by the project team. National leading practices were reviewed to support and inform the City's management approach for the pilot program. Community engagement included community and business organization meetings, scooter education and outreach events, and an email inbox for community comments. An online feedback form was conducted to collect user information and understand community attitudes toward the pilot program and how they see the program moving forward. Data from the program was analyzed to understand ridership, usage, and safety trends. Building on these data sources and the City's experience throughout the pilot program, this report outlines policy and planning recommendations for the program in Alexandria.

Leading Practices

Leading practices that have emerged as most effective in the Capital Region and across the U.S. were reviewed to help improve the City of Alexandria's pilot program and address issues that arose during the pilot.

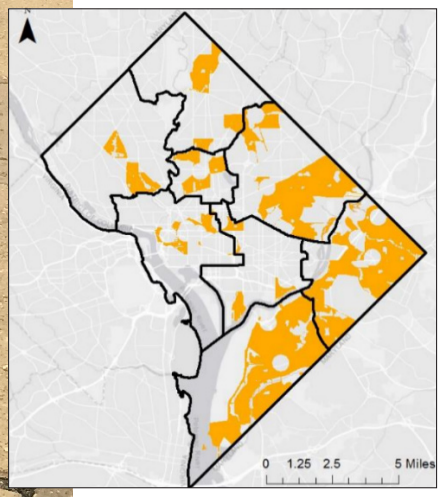
In September 2019, the National Association of City Transportation Officials (NACTO) released the second edition of its *Guidelines for Regulating Shared Micromobility*, which outlined best practices for cities and public entities to regulate and manage shared mobility.

The City of Alexandria is considering a number of changes to the program's memorandum of understanding and City Code based on Leading Practices regionally and nationally.

Equity Requirements

Equity has been a central topic of concern in shared mobility programs since bikeshare was first launched in the U.S. Shared bicycles and scooters can be low-cost transportation options, can enhance connections to a City's existing transit system, and can reduce the need for residents to own a vehicle. However, to realize these benefits, everyone must have equal access. Initial deployment of bikeshare stations and scooters often concentrates in neighborhoods with higher incomes or lower concentrations of people of color. As a result, cities should require equity to be at the forefront of their scooter programs.

Braille messaging on a scooter for identification by people with vision disabilities



District of Columbia Draft Scooter Equity Emphasis Areas

Leading cities used the following mechanisms to promote equity

Category	Supportive Actions and Requirements	Leading Examples
Scooter Distribution and Rebalancing	Define geographic areas for equitable device access. Set minimum scooter rebalancing requirements in those areas. Monitor scooter distribution throughout these defined geographic areas during the pilot or permit period and upon evaluation.	Baltimore, Washington D.C., Chicago, Portland, St. Louis
Discounted Pricing Programs	Require free or reduced cost rides for people with lower incomes. This can be accomplished through City-specified reduced cost ride program requirements, such as requiring free unlimited trips under 30 minutes.	Baltimore, Oakland, Seattle, and Washington, D.C.
Non-Smartphone and Cash Rental Access	Require non-smartphone options to rent a scooter (e.g. call or text-to-rent) and a cash payment option.	St. Louis, Chicago, Oakland, Seattle, and Washington, D.C.
Local Workforce Development	Require operators to specify how they will provide skills training and make an effort to hire local employees.	Chicago, Oakland, and Washington, D.C.
Adaptive Devices	Incentivize or require provision of adaptive scooters or bicycles as part of each operator's fleet to provide access to the program by people with mobility disabilities.	Baltimore, Bellevue, Los Angeles, Oakland, and Seattle
Braille Messaging, Embossed lettering, QR Codes, etc.	Require braille messaging, embossed lettering, QR codes, etc. on scooters to facilitate reporting of improperly parked devices by people with vision disabilities.	Washington, D.C., Montgomery County, MD
Multi-Lingual Communication	Require non-English languages commonly spoken in the service area on company websites, apps, rider education materials, customer service lines, and any other communication methods.	Baltimore, Bellevue, Chicago, Oakland, Seattle, and Washington, D.C.

Equitable Scooter Distribution and Rebalancing

- Baltimore requires vendors to distribute 25% of vehicles in specific areas with lower average household income levels.
- Washington, D.C. defines equity areas in its 2020 draft permit requirements based on an analysis adapted from the Metro Washington Council of Governments Methodology for Equity Emphasis Areas, which identifies areas with concentrated low-income, African American, Asian, or Hispanic/Latinx populations. Operators would be required to deploy a minimum of 20 devices per area.
- Chicago requires 25% of scooters be distributed in each of two pilot sub-areas by operators, and requires proportional distribution throughout the sub-areas. It has fined operators that do not comply.
- The City of Portland requires that 20% of the scooter fleet be made available in East Portland. Equity requirements were enforced at the end of the pilot program.
- St. Louis requires companies to keep 20% of their fleet in specific neighborhoods, which has generated high ridership and comparatively longer trips than other areas.

Data Requirements

Many cities are requiring more comprehensive data than previously in order to understand where scooters are being used and better inform program management and policy.

Category	Supportive Actions and Requirements	Leading Examples
Data Formats	Require consistent and industry-standard data reporting formats. Some cities require operators to provide data through an application programming interface (API) that is compliant with the Mobility Data Specification (MDS). MDS-compliant APIs allow cities to gain insights about device use and operator performance to inform their policy and planning decisions.	Most cities, including Alexandria.
Third-Party Dashboards	Some cities use third-party platforms to streamline data provision and performance monitoring. Third-party aggregator platforms can also help address privacy concerns because individual trip data is not reported.	Many cities, including Alexandria.
Crash Data and Injury Surveilance	Crash reporting does not yet capture scooter use in a standardized way in most jurisdictions. In light of this: • Health department and other epidemiological studies are currently the most comprehensive and accurate source of scooter injury surveillance. • Hospital admittance data provides the most complete dataset of scooter-involved crashes. • Cities are working with health departments, EMS/Fire, and police departments to incorporate fields that differentiate scooters and other micromobility devices into incident reporting forms to increase safety analysis accuracy and completeness. • Educational materials are used to promote the use of new scooter-related codes by healthcare providers.	City of Austin, Los Angeles, North Carolina.

Parking Requirements

Accessibility is a concern for cities with scooter programs, and although improper parking or sidewalk riding affects all pedestrians, it particularly impacts people with disabilities. To improve parking behavior and maintain accessible sidewalks, cities can include regulations and education requirements within the scooter program.

Category	Supportive Actions and Requirements	Leading Examples
Removal of Devices	Require operators to retrieve inoperable devices within a reasonable time period (24-72 hours) and devices that impede the pedestrian travel zone—such as ADA routes and ramps, transit stops, or building entrances—immediately (2 hours).	Most cities, including Alexandria.
Parking Corrals	Parking corrals may be installed to better organize scooter parking when 1) scooter parking overwhelms available space to park on sidewalks, 2) there is high ridership to and from a specific location, or 3) where there is a desire from the community to better organize scooter parking.	Many cities, including Alexandria.
Geofencing No-Parking Zones	Geofenced “no-parking” zones around areas frequented by individuals with vision disabilities (e.g. campuses or buildings serving these people) or in areas with especially high pedestrian volumes and narrow sidewalks. Geofencing has a margin of error of 20 to 40 feet, and so geofencing no-parking zones for sidewalks is not feasible – but would work well to limit parking in large areas like the Waterfront or Market Square.	Many cities, including Alexandria.
Education	Require operators to instruct riders on parking requirements. Provide hang-tags on scooters with proper parking instructions. Offer educational events that include instructions on how and where to park.	Most cities, including Alexandria.

Speed and Safe Riding Facilities

The following leading practices apply to speed and safe riding facilities.

Category	Supportive Actions and Requirements	Leading Examples
Speed Restrictions	Set maximum speeds for a device that account for local conditions and balance scooter rider and pedestrian safety and comfort.	Washington D.C. (10 mph), Montgomery County (15 mph), Arlington County (15 mph in 2020), Alexandria (15 mph in 2020).
Slow-Ride or No-Ride Zones	Geofence areas as slow-ride or no-ride zones to address safety concerns or conflicts between scooter riders and pedestrians in areas of high activity. Geofencing has a margin of error of 20-40 feet, so geofencing slow zones and no-ride zones is most practical in larger areas of at least a block.	Santa Monica and the City of Spokane.
Education	Require operators to instruct riders on safe riding techniques. Offer educational events that include instructions on safe riding.	Most cities, including Alexandria.
Low-Stress Facilities	Consider how complete street design standards may need to change to accommodate a wider variety of low-to-moderate speed micromobility devices, including scooters, uniwheels, and other personal mobility devices. Accelerate the implementation of high-quality, separated bicycle infrastructure, especially on roadways with higher levels of traffic stress or high demonstrated or expected demand to support Vision Zero goals.	Most cities, including Alexandria.

Program Management

In leading cities, regulatory steps are outlined in the program structure and operator compliance is enforced by monitoring the data provided by vendors.

Category	Supportive Actions and Requirements	Leading Examples
Performance Measures	Define performance measures at the outset of the scooter program.	Most cities, including Alexandria.
Compliance Evaluation	Track data compliance, quality of customer service and response times, device distribution, and device utilization rates to evaluate operator performance.	Most cities, including Alexandria.
Fleet Size Adjustments	Set fleet maximums to correspond with expected demand in the city. Allow companies to deploy additional vehicles based on demonstrated ridership and other performance metrics defined by the city.	Many cities, including Alexandria.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Community Engagement

Community engagement was a critical aspect of the pilot process and so feedback from the public informed the recommendations in this report. This chapter describes the City's engagement efforts, which included the following actions:

- Met with community and business organizations.
- Organized and hosted scooter education and outreach events.
- Collected community feedback via emails received at dockless.mobility@alexandriava.gov.
- Conducted two online community feedback forms to gather public feedback.
- Presented to and received feedback from multiple City Boards and Commissions

Community and Business Organization Meetings

The City met with five community and business organizations in August and September 2019. Staff heard from each group about their experiences with scooters including parking and other aspects of the program.

Community and Business Organization Meetings

Organization/Group	Date
Del Ray Business Association	August 19
National Federation for the Blind	August 22
Cameron Station Civic Association	September 4
Alexandria business representatives	September 9
Old Town residents	September 16

What We Heard

Participants expressed several concerns, most often:

People sometimes ride or park scooters on the sidewalk in a way that compromises other people's comfort or use of the sidewalk.

Seeing scooter riders can be a challenge for drivers.

If restrictions on scooters are implemented, it could negatively impact businesses.

The community is still adjusting to scooters in the public right of way.

Residents wanted to hear how the City has tracked and responded to complaints received about the pilot.

National Federation for the Blind members commented that:

Scooters are silent, so people with vision disabilities can't hear them, which is particularly a concern on sidewalks.

Scooters parked on the sidewalk pose a tripping hazard for pedestrians with vision disabilities, especially because they may not be parked upright or in predictable locations.

The alarms that sound when locked scooters are moved can startle people with vision disabilities and make it difficult for them to hear the sound of traffic, which is important for orientation and navigation.

It is difficult for a person with a vision disability to identify and report an inappropriately parked scooter, because the relevant reporting information is not provided in a way that is accessible to people with vision disabilities, e.g., braille or QR code.

Scooter Education Outreach Events

The City conducted four scooter education outreach events in August and September 2019. The events provided an opportunity for the public to ask questions about the pilot and learn about safe operation and parking of scooters.

Scooter Education Outreach Events

Event	Date
Four Mile Run Farmers Market	August 11
Southern Towers Farmers Market	August 24
Old Town – King Street & Union Street	September 3
First Thursdays Del Ray	September 5

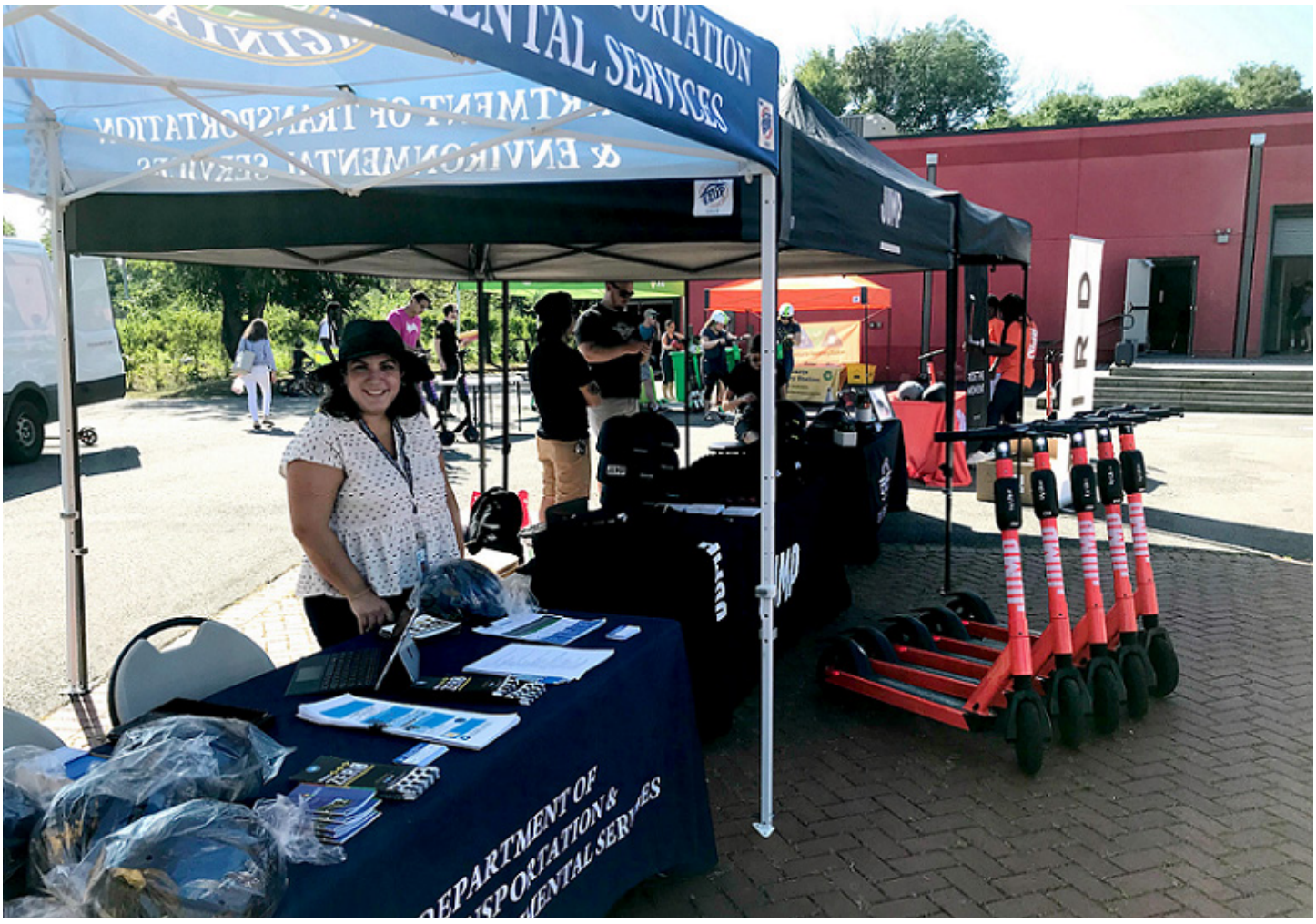
Key Takeaways

Key takeaways from the public education and outreach events included the following:

Many attendees had never ridden a scooter. Some used the event as an opportunity to try scooters in a safe environment and receive instruction on proper riding.

Some community members were initially unsupportive of the scooter program, but many came away with a better understanding of the program and the City's efforts to improve it after having an opportunity to ask questions and discuss concerns with City staff.

Alexandria Staff and Scooter Operator Representatives at a Scooter Education Outreach Event



Dockless Mobility Inbox and Call.Click.Connect

The City provided an email address that residents could use to comment on the pilot. Over 600 emails were received and reviewed by City staff. Many submissions raised concerns about scooter parking, sidewalk riding, unsafe riding, and a perceived need for more enforcement. Others wrote to express support, often citing how scooters had improved access and mobility in their day-to-day lives.

In addition to emails, the City also received 271 scooter-related tickets through its Call.Click.Connect system through mid-September.

Pilot Program Assessment Feedback Form

The City sought input on the program through a Pilot Program Feedback Form, including primary issues and challenges and ways the program could be improved.

The form was not a scientific survey and was distributed at public outreach events, published on the City's website, sent to the City's E-News email list subscribers, and shared with scooter users registered in Alexandria by operators. Responses were collected for 3 weeks in late August.

Who Did We Hear From?

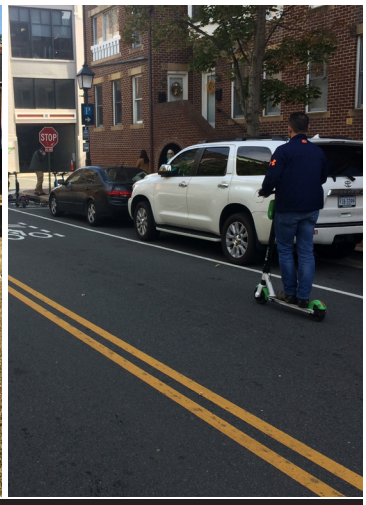
- The feedback form received 2,914 responses.
- 38% of respondents have ridden a scooter and 62% have not.
- 8% of respondents who ride scooters do not have access to a vehicle.
- 8.5% of respondents identified as having a disability.
- Approximately 65% of respondents self-identified as white, 14% as non-white, and 20% declined to self-identify.

Where do you most frequently ride scooters in The City of Alexandria?

On a trail/path (e.g. Metro Linear Trail)
Most frequently ride: 8%
Prefer to ride: 14%

In a bike lane
Most frequently ride: 26%
Prefer to ride: 53%

On the sidewalk
Most frequently ride: 17%
Prefer to ride: 14%



In the street
Most frequently ride: 48%
Prefer to ride: 19%

Pilot Program Assessment Feedback Form Results

Riders and non-riders where asked a series of questions about how the program is working, including what the top issues are, the changes that are needed, where more scooters are needed, and where people should be allowed to park scooters. These responses are summarized below.

What are the Biggest Issues with Scooters in the City?

- Incorrectly parked scooters
- Speeding or unsafe user behavior

What Changes are Needed?

For riders, the top three needed changes were:

- Establishing more dedicated space for ridivng scooters off sidewalks in areas with high usage
- Establishing more dedicated space for parking scooters off sidewalks
- Encouraging more responsible parking of scooters

Non-riders said the top 3 changes needed are:

- Enforcement of traffic rules for e-scooter riders
- Banning (parking and riding) scooters in certain areas
- Establishing more dedicated space for parking scooters off sidewalks

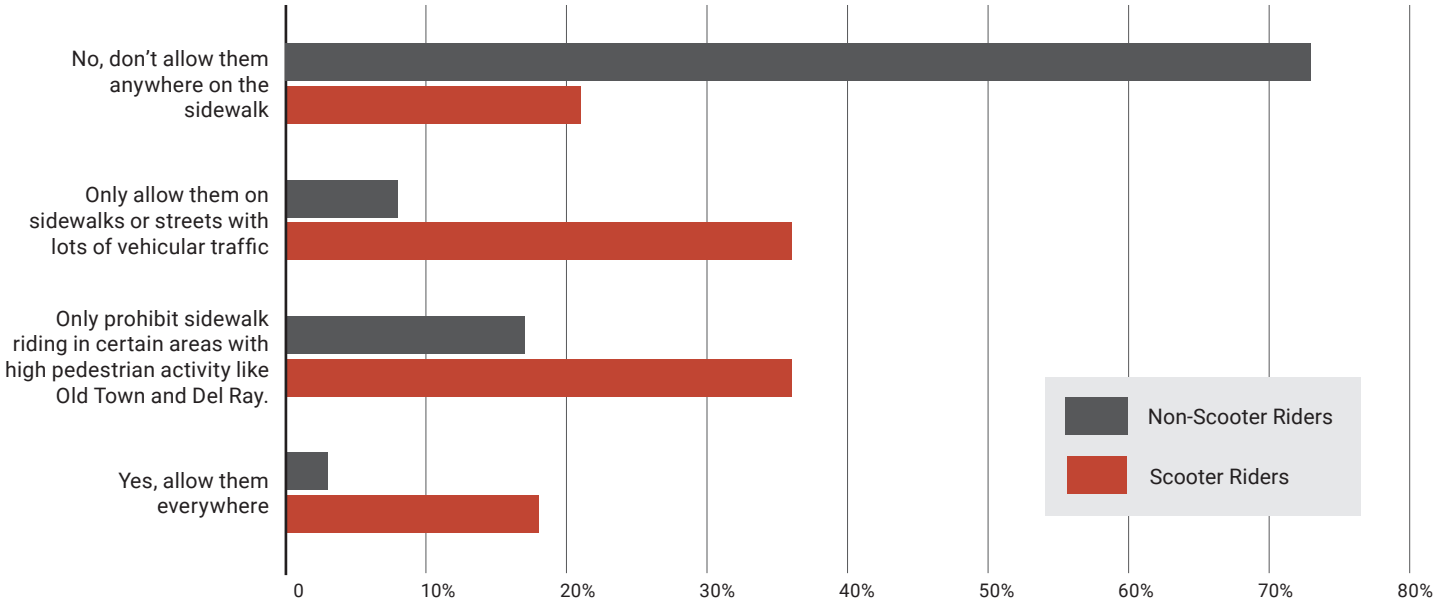
There was no substantial difference in preferred changes to the program between people with disabilities and those without.

Should Scooters be Allowed on Sidewalks?

64% of scooter riders felt scooters should be allowed on sidewalks under certain circumstances and 18% felt scooters should be allowed everywhere on sidewalks.

Almost three quarters (73%) of non-riders felt scooters should not be allowed anywhere on the sidewalk. This divergence of opinion may suggest that users are most comfortable in a separated space from traffic, such as a separated bike lane.

Do you think people should be allowed to ride scooters on the sidewalk?



Where should scooters be parked?

At a bike rack: 45%

At a designated space on the street: 39%

At a designated space on the sidewalk: 27%

Draft Recommendations Feedback

Commission Meetings

City staff met with City Council, the Waterfront Commission, and the Transportation Commission and solicited general public input through a Draft Recommendation Feedback Form to help define the requirements of a Phase II pilot. Three meetings were held to discuss the draft recommendations, as shown in the table below.

City Council and Commission Meetings

Organization/Group	Date
City Council	October 2
Waterfront Commission	October 13
Transportation Commission	October 16

What We Heard

Staff presented draft recommendations to the Waterfront Commission and Transportation Commission.

The Waterfront Commission did not take an official position on the recommendations but urges continued coordination between staff and the Commission if the pilot program is continued in 2020. Improving improper parking, unsafe riding, and excessive riding and parking in the Waterfront were noted as key issues and the Commission was generally supportive of efforts to create more corrals, assuming impacts to vehicular parking are minimized. Some noted the value that scooters provide as an additional transportation mode, while others emphasized the safety and parking issues as significant reasons to ban scooters.

The Transportation Commission moved to affirm that the draft recommendations in the proposed plan are consistent with the goals outlined in the City's Transportation Master Plan, adopted in 2008 after discussion of draft recommendations and a public hearing. The Transportation Commission recommended that City Council approve a Phase II Pilot Program for the Dockless Mobility Program for 2020 to allow staff to continue to work through the challenges with new forms of mobility. The Commission noted that stricter requirements of vendors participating in this program and updates to the City Code to provide the Alexandria Police Department more authority to enforce these rules were key in their recommendation.

Draft Recommendations Feedback Form

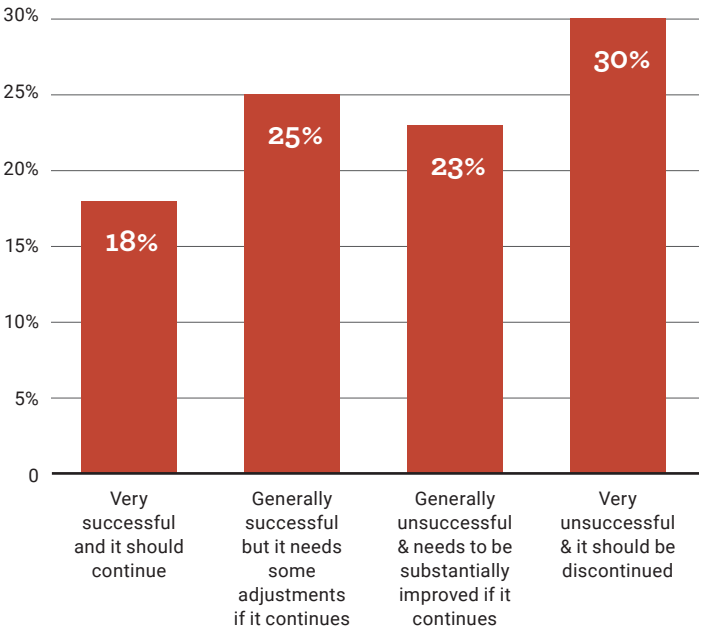
An additional feedback form was fielded to solicit community feedback on proposed recommendations for the Phase II pilot. Input from these meetings and feedback form was incorporated in the recommendations in this report.

Who Did We Hear From?

- The feedback form received 829 responses
- 40% of respondents have ridden a scooter and 60% have not
- 9% of respondents who ride scooters do not have access to a vehicle
- 10% of respondents identified as having a disability
- Approximately 74% of respondents self-identified as white, 10% as non-white, and 15% declined to self-identify

Draft Recommendations Feedback Form Results

- 51% support a Phase II Pilot and 49% do not
- Of those who support a Phase II Pilot, 35% have never ridden a scooter
- 80% of all respondents support the installation of more corrals
- Priorities for enforcement: traffic violations (failure to stop at stop signs or red lights), sidewalk speeding, parking in a way that impedes pedestrian traffic or ADA accessibility
- Sidewalk riding: 67% of program supporters say scooters should be allowed where bikes are allowed, while 85% of those who do not support the program would prefer to ban scooters from all sidewalks



* No opinion: 4%

Data Analysis and Findings

Methodology

The findings in this section are based on quantitative and qualitative data collected throughout the pilot period.

Quantitative inputs

Availability, trip, collision, route, and complaint data provided by operators were cleaned and compiled for analysis. The process of cleaning and analyzing operator-provided data is documented in detail in Appendix C. Injuries and collisions reported by the Alexandria Police Department (APD) and Fire/EMS, by residents via the City's Dockless.mobility@alexandriava.gov email address, and by the Alexandria Health Department were also incorporated into the analysis.

Qualitative inputs

Community feedback and complaints were provided through resident emails to the Dockless.mobility@alexandria.gov email address, the City's Call.Click.Connect system, and the Pilot Program Assessment Feedback Form. Focus groups with civic associations and business groups were also included as information sources to inform the report findings and recommendations.

KEY FINDINGS:

Five key findings emerged from the qualitative and quantitative data analysis:

1. Scooters have provided increased access and mobility in Alexandria.
2. Scooters are a new form of mobility and safe riding is a concern.
3. Improper scooter parking can disrupt the pedestrian right of way and impede ADA access.
4. Scooters could improve transportation equity but new policy is needed.
5. The program recouped costs but modifications to management will minimize City financial and staff resources.

KEY FINDING:
SCOOTERS HAVE INCREASED COMMUTING OPTIONS AND MOBILITY IN ALEXANDRIA.

ALEXANDRIA SHOULD CONSIDER

Implementing a Phase II Pilot Program through December 2020 with a modified MOU, application and permit fee structure.

SUPPORTING DATA & COMMUNITY INPUT

More than **230,000 scooter trips** were reported from January through September 2019.

Approximately **225,000 miles** were traveled via scooter during this period.

Average trip time is **10-15 minutes**, with an average trip distance of **just under 1 mile.**

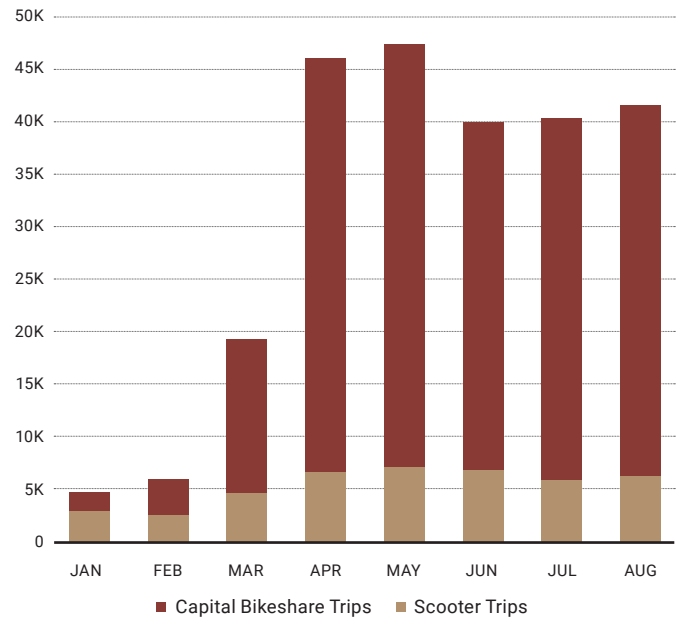
Scooter companies report there are **approximately 15,000** active users in Alexandria.

Approximately **780 devices** were available on a typical day (approximately 1/2 of the total permitted).

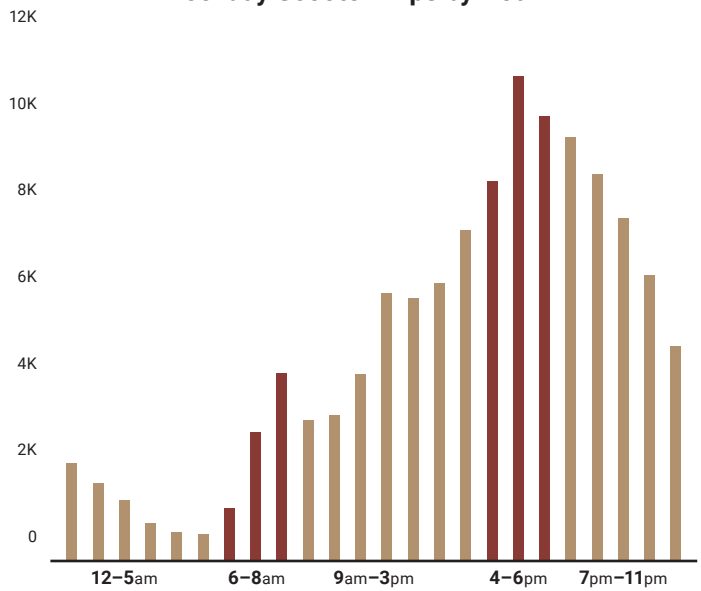
Approximately 1/3 of weekday scooter trips were taken during **commuting hours**.

Approximately 2/3 of trips were taken on **weekdays**.

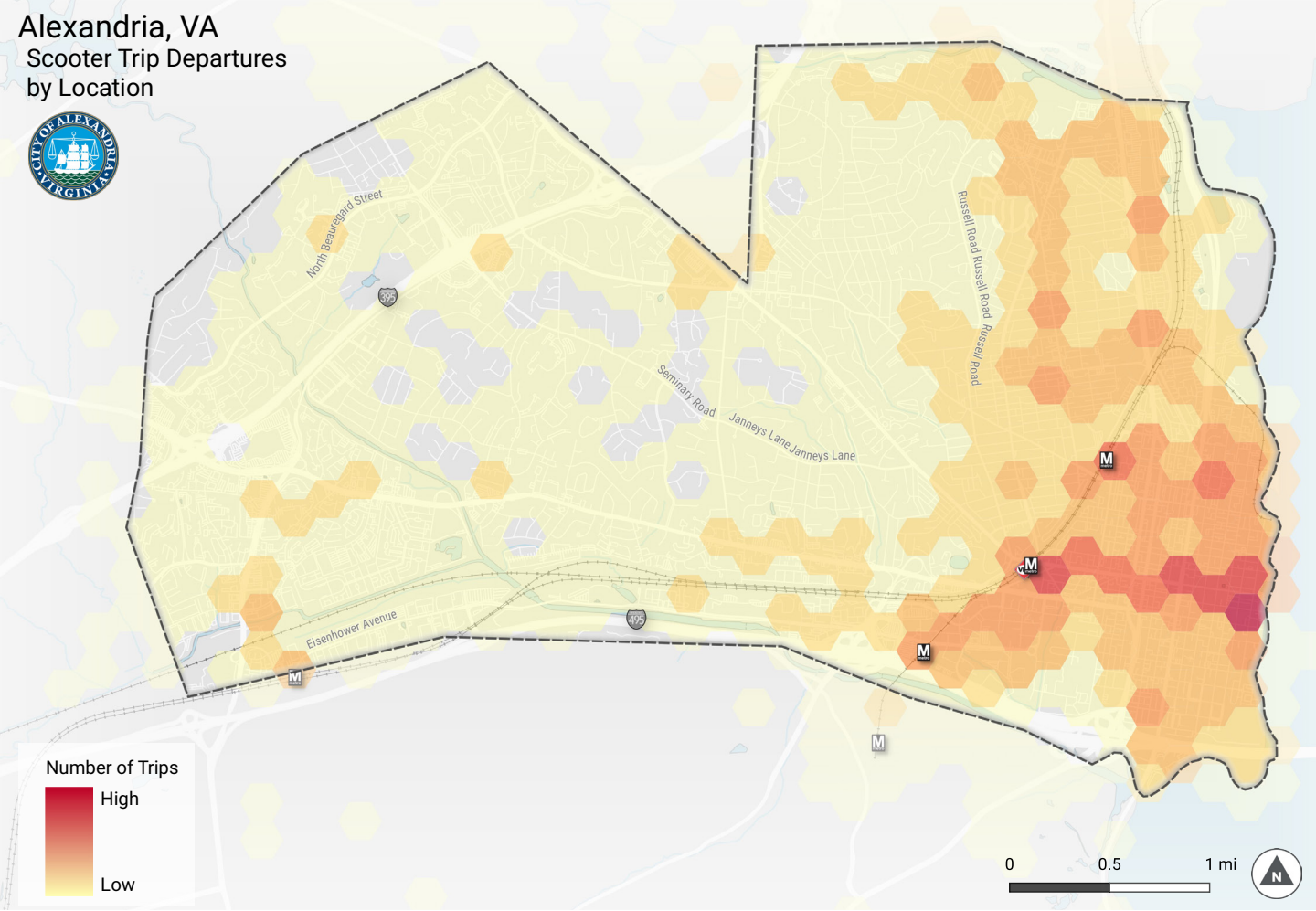
Total Shared Mobility Trips



Weekday Scooter Trips by Hour



Commuting Hours: 6am–8am; 4pm–6pm



Trip Origins and Destinations

Approximately, **60%** trips originated in the Old Town, **11%** in Potomac Yard, **8%** in Del Ray, and **7.5%** in Eisenhower East.

Trip destinations closely mirrored origins.

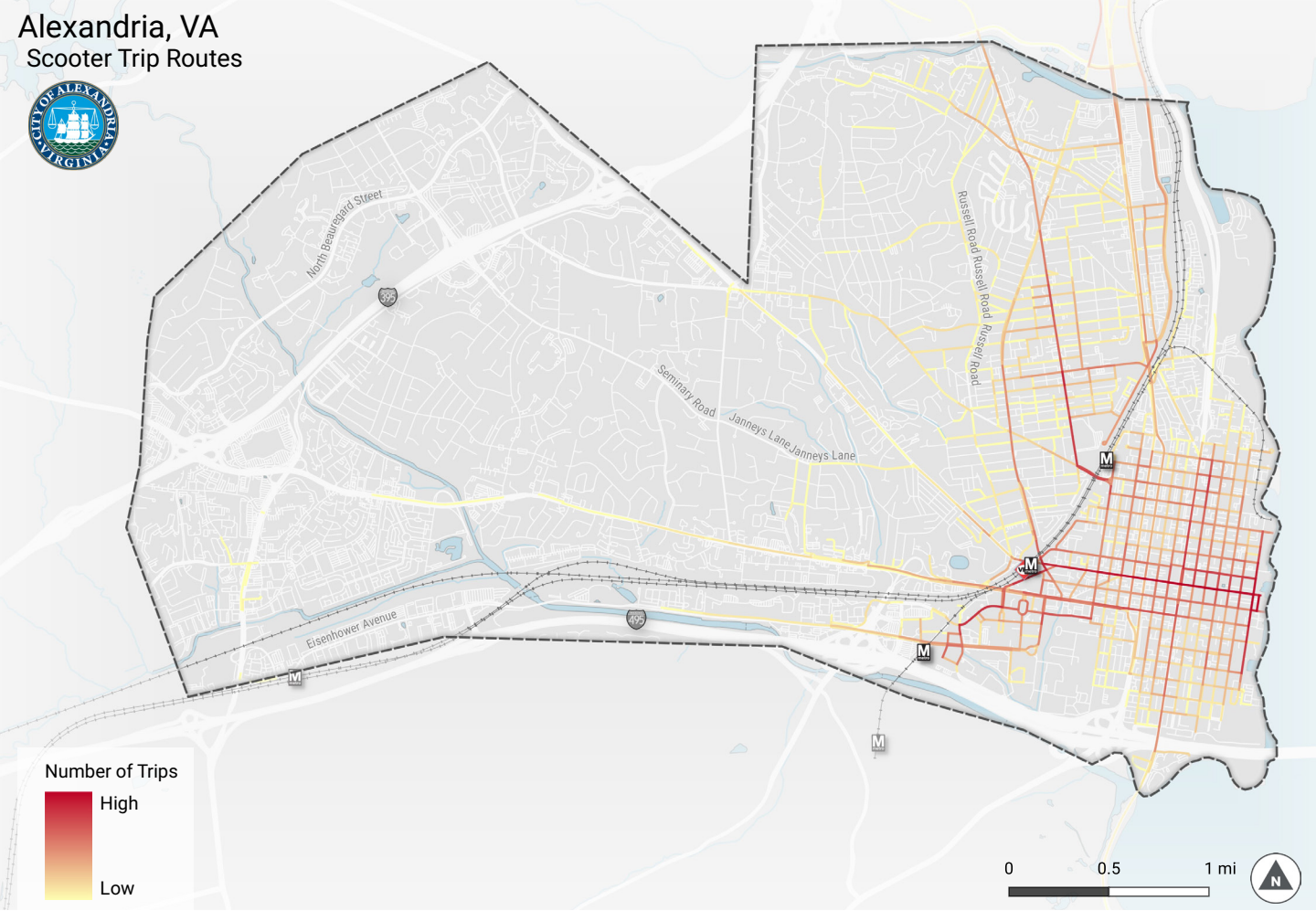
Scooters provided access to transit and many replaced automobile trips. Approximately **20%-25%** of trips started at King Street, Braddock Road, Eisenhower Avenue, and Van Dorn Metro Stations prior to the beginning of the 2019 Metro Platform Improvement Project on May 25.

Approximately **40%** of scooter trips originated or ended in areas with high volumes of transit ridership.

Trip Routes

Approximately **8%** of trips occur on King Street.

Union Street, Mount Vernon Avenue, and the route between the Eisenhower Avenue and King Street metro stations also saw higher trip densities.



According to the Pilot Program Assessment Feedback Form...

When asked **"If there were no scooters in the City, how would you have taken most of these trips?"**, almost 70% of users (980) responded that they would have either used a personal vehicle, used a rideshare app (such as Uber or Lyft), or taken a taxi as one of their top two choices.

67% of users (626) indicated that using scooters has decreased their need for parking.

When asked if "scooters increased your access to public transportation in Alexandria", **60%** of users (564) agreed.

WHAT PEOPLE SAID...

"My bus (AT7) only runs every 30 minutes, I take a scooter when I miss it."

"[I use the program for trips] that are too far to walk but impractical to drive/Uber."

"[I use the program] to avoid driving and reach a further distance than just walking."

KEY FINDING: SCOOTERS ARE A NEW FORM OF MOBILITY AND SAFE RIDING IS A CONCERN.

ALEXANDRIA SHOULD CONSIDER

Adding new regulations including:

- Consider areas in which scooter sidewalk riding would be banned.
- Speed limits: 15 mph on streets.
- Limiting one rider per device.
- Requiring operators to provide in-app safety messaging, rules of the road and sidewalk riding.

Outreach and Evaluation:

- Evaluating additional "No-ride" and "Slow-ride" zones and sidewalk bans.
- Hosting outreach & education events with operators throughout spring and summer.

SUPPORTING DATA & COMMUNITY INPUT

APD Educational Efforts

Alexandria Police Department has conducted focused rider **education** efforts on weekends and in high-use areas.

APD stopped a total of **154 scooter users** during the pilot period to issue warnings and provide education about safe riding.

49% of complaints (275) received in the Dockless Mobility Inbox referenced concerns about safety.

67% of Pilot Program Feedback Form respondents (1689) also indicated that speeding or unsafe user behavior was a concern.

Scooter Crashes[1]

15 crashes were reported involving scooter users during the pilot period based on APD data, by operators, and by citizens via the City's Dockless Mobility Inbox. These included **five collisions** where a motor vehicle driver was involved.

18 minor injuries and **three suspected serious injuries** were reported, based on APD data and citizen reporting to the City's Dockless Mobility Inbox.

Data from the Alexandria Health Department identified **10 cases** treated at hospitals or urgent care facilities where any kind of scooter was identified as possibly involved. See Appendix D for the full Alexandria Health Department report.

During the same months in 2018, motor vehicles were involved in **approximately 675 crashes** in Alexandria, of which **356 caused injuries**, including **26 suspected serious injuries**, and **2 fatalities**.

Based on this contextual data, it is estimated that scooters were involved **<2%** of all crashes in Alexandria during the pilot period.

ADA Accessibility

Feedback from a stakeholder meeting with the National Federation for the Blind indicated concerns that scooters operate nearly silently. There is not yet a federal standard for a minimum decibel level for operation, so people with vision disabilities are not able to recognize when they are approaching.

1 Based on the reporting system limitations, it is possible that some reported cases did not involve scooters that were part of the pilot program, and it is also possible that additional cases occurred that were not captured.

KEY FINDING: IMPROPER SCOOTER PARKING CAN DISRUPT THE PEDESTRIAN RIGHT OF WAY AND IMPEDE ADA ACCESS.

ALEXANDRIA SHOULD CONSIDER

- Requiring operators to stage in a parking corral if one exists nearby.
- Installing additional parking corral locations.
- Developing a streamlined "reporting" process.
- Additional "No-park" zones in areas with high pedestrian activity.
- Working with operators as technology develops for stricter parking requirements.
- Requiring braille,embossed lettering, QR codes, etc. on scooters to enable those with vision disabilities to report improper parking.

SUPPORTING DATA AND COMMUNITY INPUT

Approximately **25%** of **scooters were deployed** in or near a corral following corral installation.

City staff **impounded 31 scooters** that were improperly parked.

The City's Street Team **straightened 230 improperly parked scooters**.

ADA Accessibility

The National Federation for the Blind stakeholder meeting reinforced concerns about improper parking of devices creating a potential tripping hazard, and that improperly parked devices may impede an accessible pedestrian route by blocking curb ramps.

What changes should the City consider to better manage scooter parking?

- Supported banning scooters from parking in certain places. This strategy has been tested with the pilot's geofencing requirements.
- Supported establishing more dedicated space for parking scooters off sidewalks
- Said a need to continue encouraging more responsible parking of scooters.
- Supported establishing more dedicated scooter parking space specifically in areas with high usage. T&ES has also implemented this strategy during the pilot by creating in-street parking corrals for dockless mobility devices, especially in high-demand locations.

WHAT PEOPLE SAID...

"Scooters block sidewalks and ramps and impede persons that are handicapped or have mobility issues."

"I've had to move scooters out of the way."

"[There is] Not enough designated scooter parking."

What are the biggest issues with scooters in the City?

66% of complaints received via the Pilot Program Feedback Form were parking-related.

According to the Pilot Program Feedback Form, **75%** of all respondents (1891 of 2537) noted that incorrectly parked scooters were a top concern.

KEY FINDING: SCOOTERS COULD IMPROVE TRANSPORTATION EQUITY BUT NEW POLICY IS NEEDED.

ALEXANDRIA SHOULD CONSIDER

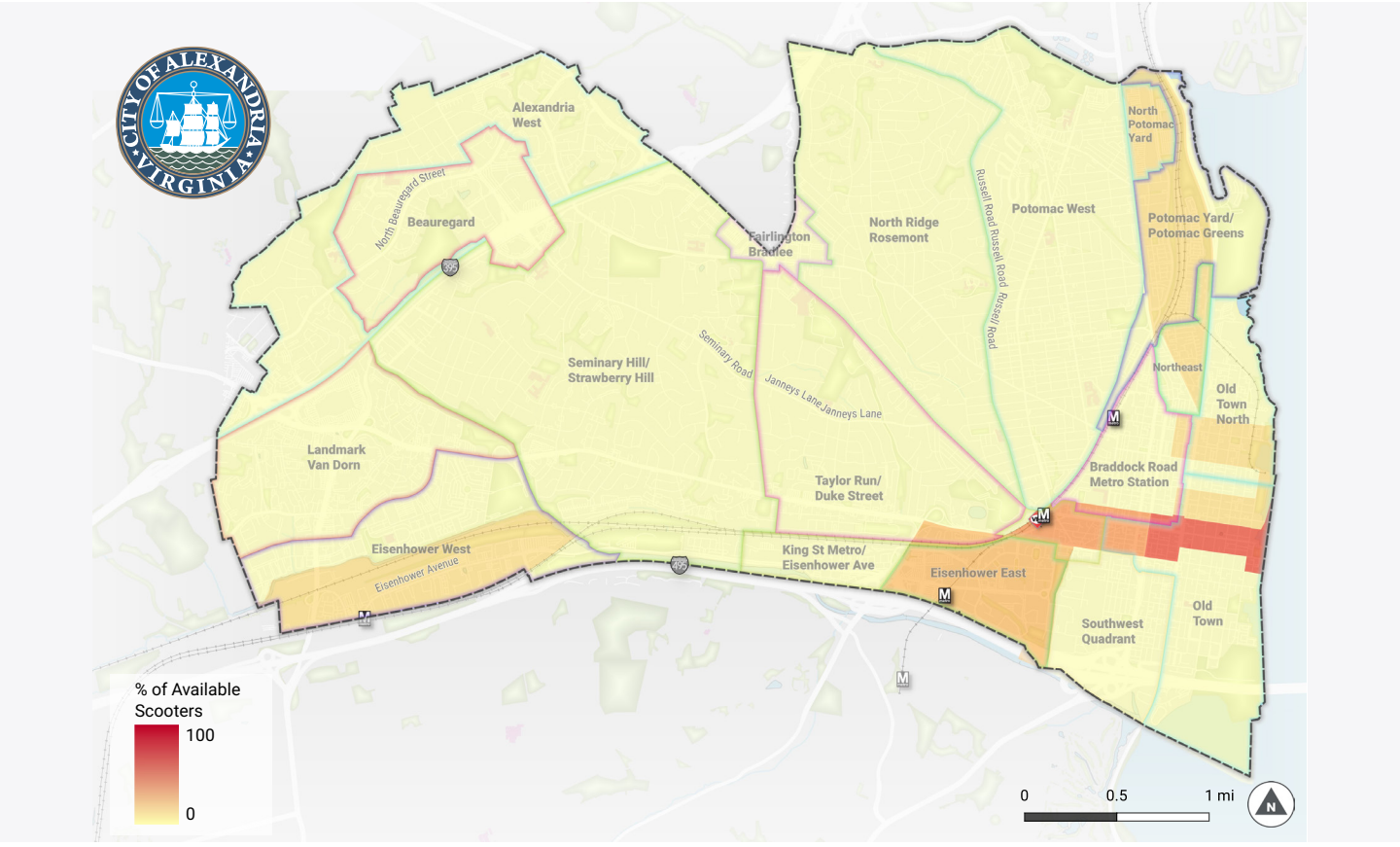
- Requiring operators to deploy and rebalance scooters in neighborhoods throughout the City.
- Identifying areas that are historically underserved or have greater unmet transportation needs and require rebalancing to these areas.
- Requiring alternative rental mechanisms besides smartphones (e.g. call or text-to-rent) and cash payment options.
- Developing an income-based discount program and requiring all operators to participate.
- Encouraging operators to use local workforce development in their staffing plans.

SUPPORTING DATA AND COMMUNITY INPUT

The Alexandria Transportation Master Plan identifies the goal of providing all citizens, including those without a personal motor vehicle, accessibility and mobility.

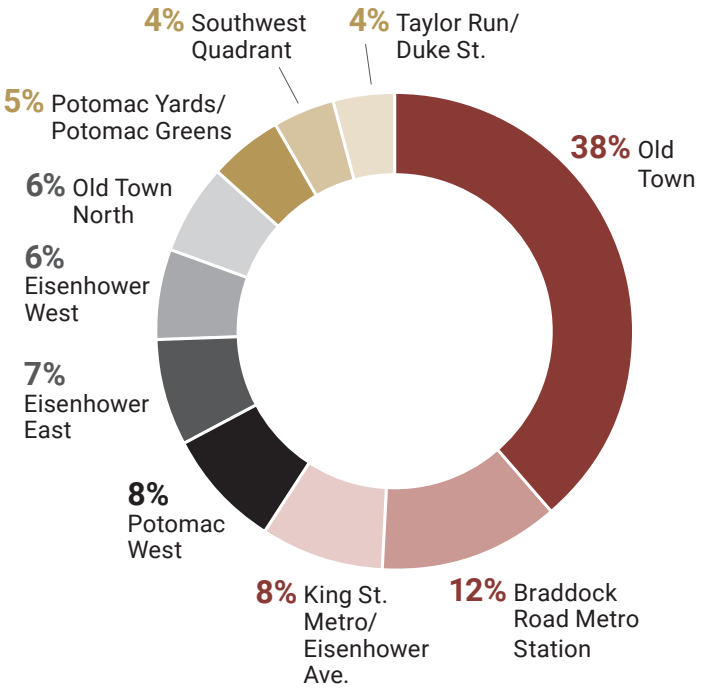
Availability

Scooter availability was most concentrated in Old Town in the King Street retail corridor, with **18-22%** of all available scooters in this area.



Where are scooters deployed?

Scooter deployment was highest in areas along or adjacent to the King Street downtown corridor.



Areas with 1% or less of scooters available:

- Landmark Van Dorn
- Northeast
- North Potomac Yard
- North Ridge Rosemont
- Beauregard
- Alexandria West
- Fairlington Bradlee
- Seminary Hill/ Strawberry Hill

Parts of the city such as Alexandria West, Beauregard, and northern Potomac West, which have the greatest concentrations of households in poverty, households without access to a motor vehicle, and people of color in the city could benefit from increased scooter availability.

Existing Low-Income Customer Plans

Company	Low Income Discount	Non-Smartphone Access	Non-Credit Card Payment Option
BIRD	Unlimited 30-minute rides for $5 / month	SMS text to unlock	Yes
BOLT	50% off all rides	SMS text to unlock	Yes
JUMP	Unlimited 30-minute rides for $5 / month	Call to unlock	Yes
LIME	50% off all rides	SMS text to unlock	Yes
LYFT	Unlimited 30-minute rides for $5 / month	SMS text or call to unlock	Yes
SKIP	50% off all rides	Call to unlock	Yes
SPIN	Up to 50% off all rides	SMS text to unlock	Yes

WHAT PEOPLE SAID...

"Sometimes [scooters] aren't close enough to access to be relied on 100% of the time."

"I had abdominal surgery and can no longer walk far without pain. Scootering allows me to do more near my home in Alexandria."

"Do you have access to a motor vehicle that you or someone in your household owns?"

According to the Pilot Program Assessment Feedback Form...

46% of those without access to a motor vehicle (71 of 154) said they had used a scooter.

KEY FINDING: THE PROGRAM RECOUPED COSTS BUT MODIFICATIONS TO MANAGEMENT WILL MINIMIZE DEDICATION OF CITY FINANCIAL AND STAFF RESOURCES.

ALEXANDRIA SHOULD CONSIDER

- Requiring scooter companies to provide data via an MDS feed or a similarly detailed future data standard.
- Working with the City's third-party data aggregator to streamline data access.
- Establishing a City Manager appointed Ad-Hoc Scooter Task Force for the duration of the Phase II pilot.
- Developing a streamlined "reporting" process.

SUPPORTING DATA AND COMMUNITY INPUT

Future fees should cover the costs of the program.

2019 Scooter Financials	
Permit fees	$35,000
Permit extension (September through December, 2019)	$35,000
Management, evaluation, and operations	($65,000)
TOTAL	$5,000

Taxes Collected

Each of the scooter companies is subject to the City's Short Term Daily Rental Tax, which requires each company to pay a tax of 1% on the gross proceeds of their rentals. This tax is collected quarterly. Staff estimates the City will collect approximately $13,000 annually. Additionally, if a company were located within Alexandria, they would be required to obtain a business license. However, at this time, none of the companies' offices are physically located within the City limits.

Program changes to improve efficiency in Phase II

Pilot		Phase II
Compiling data from individual companies	→	Require MDS data and working with a 3rd Party Data Aggregator.
Attending multiple focus groups	→	Establish and meet with Ad Hoc Group throughout Phase II pilot.
Calls and tickets received through Call.Click. Connect staff	→	Redirect directly to companies.

Conclusion and Recommendations

Alexandria's pilot program allowed the City to evaluate issues and opportunities related to scooter use and demonstrated that scooters provide a valuable transportation function.

A Phase II Pilot for 2020 and accompanying program modifications are recommended to address challenges experienced during the pilot program, to continue to evaluate the program, and to allow the City to determine the most appropriate long-term program structure.

Recommendations

Key Finding	Alexandria Should Consider
Scooters have provided increased access and mobility in Alexandria	• Implement a Phase II Pilot Program through December 2020 with a modified MOU, application and permit fee structure.
Scooters are a new form of mobility and safe riding is a concern	• Sidewalks: Consider areas in which scooter sidewalk riding would be banned. • Speed limits: 15 mph on streets • Limit one rider per device. • Require operators to provide in-app safety messaging, rules of the road, and sidewalk riding information. • Evaluate additional "No-ride" and "Slow-ride" zones and sidewalk bans. • Host outreach & education events with operators throughout spring and summer. • Coordinate with regional partners for consistency. • Continue to implement Complete Streets and Vision Zero safety improvements to provide safe places to ride scooters and reduce conflicts on sidewalks.
Improper scooter parking can disrupt the pedestrian right of way and impede ADA access	• Require operators to stage in a parking corral if one exists nearby. • Install additional parking corral locations. • Develop a streamlined "reporting" process. • Consider other large areas with high pedestrian activity for "No-park" zones. • Work with operators as technology develops for stricter parking requirements. • Require braille, embossed lettering, QR codes, etc. to enable those with vision disabilities to report improper parking.
Scooters could improve transportation equity but new policy is needed	• Require operators to deploy and rebalance scooters in neighborhoods throughout the City. • Identify areas that are historically underserved or have greater unmet transportation needs and require rebalancing to these areas. • Require alternative rental mechanisms besides smartphones (e.g. call- or • text-to-rent) and cash payment options. • Develop an income-based discount program and require all operators to participate. • Encourage operators to incorporate local workforce development into their staffing plans.
The program structure recouped costs but modifications to management will minimize dedication of City financial and staff resources.	• Require scooter companies to provide data via an MDS feed or a similarly detailed future data standard. • Work with the city's third-party data aggregator to streamline data access. • Establish a City Manager appointed Ad-Hoc Scooter Task Force for the duration of the Phase II pilot. • Develop a streamlined reporting process.

Appendix A

Pilot Program Assessment Feedback Form Results

Appendix B

Draft Recommendations Feedback Form Results

Appendix C

Data Analysis Methodology

Appendix D

Alexandria Health Department E-Scooter Injury Report

Alexandria Dockless Mobility Pilot Evaluation

November 2019